phonates are widely used and are considered an effective intervention for risk reduction of postmenopausal fractures. The 100% out-of-pocket purchase of medicines by patients is a reality in Brazil. So, a study under patient perspective is an important tool to help decision-making. **OBJECTIVES:** The present study was conducted to compare the cost of bisphosphonates used for risk reduction of post-menopause vertebral and non-vertebral fractures under patient perspective in Brazil. **METHODS:** The most important bisphosphonates in the Brazilian market to patients are ibandronate (oral and IV), zolendronate, alendronate and risendronate. There are no head-to-head clinical trials comparing all the compounds. Studies of ibandronate [Eisman, 2008] and zolendronate [McClung, 2007] demonstrated their non-inferiority against oral bisphosphonates. Therefore, a cost-minimization approach was taken. Drug consumer prices were obtained from official public sources [Kairos magazine, May 2009]. Since the time horizon of this analysis is one-year, no discount rate was utilized. Costs are presented in Brazilian Reais (US$1.00~R$2.00 in May 2009). **RESULTS:** Total cost per patient was R$1534.36 for IV ibandronate, R$1685.83 for alendronate, R$1941.17 for oral ibandronate, R$1951,26 for zolendronate and R$2354.52 for risendronate. **CONCLUSIONS:** Findings suggest that IV ibandronate is a cost-saving therapy with potential of reducing the total treatment cost per patient from 9% up to 35%, when compared to alendronate and risendronate respectively, considering patient perspective in Brazil.

PMS53

ECONOMIC EVALUATION OF TRAMADOL/PARACETAMOL COMBINATION TABLETS VS NSAIDS FOR OSTEOARTHRITIS PAIN IN SPAIN

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OBJECTIVES: To compare the costs of treating osteoarthritis (OA) pain using combination tramadol/paracetamol tablets, Non-Steroidal Anti-Inflammatory Agents (NSAIDs) alone or NSAIDs plus proton pump inhibitors (PPIs) from the perspective of the Spanish National Health System. **METHODS:** A decision-analytical model was constructed to analyse the cost outcomes of the three treatment strategies over 6 months. A cost-minimisation approach was used, which considered data related to resource utilisation, medication costs and costs for the treatment of adverse events. Data, derived mainly from the clinical literature, were supplemented by inputs from a Delphi panel as well as official price and tariff lists. The base-case analysis considered direct medical costs, including those for treating gastrointestinal (GI) and cardiovascular (CV) adverse events. Separate scenario analyses explored costs of NSAID-based regimens when renal events attributable to NSAIDs were considered. Univariate sensitivity analysis and scenario analysis considering different levels of adverse events, risk and adverse events costs where also carried out. **RESULTS:** In the base-case analysis, costs for 6 months´treatment of OA pain using tramadol/paracetamol were €232.86 compared with €274.60 for NSAIDs + PPIs and €133.75 for NSAIDs alone. This provided a cost saving of €41.74 per patient over 6 months for tramadol/paracetamol compared with NSAIDs + PPIs and a cost increase of €99.11 compared with NSAIDs alone. When renal adverse events of NSAIDs were considered, tramadol/paracetamol was cost saving compared with all NSAID-based regimens (saving €140.02 vs NSAIDs alone, €280.86 vs. NSAIDs + PPIs). Sensitivity analysis confirmed these results using extreme values of probabilities and unit costs for all options. **CONCLUSIONS:** Tramadol/paracetamol is cost saving compared with NSAIDs + PPIs for the treatment of OA pain over a period of 6six months. Tramadol/paracetamol is also cost saving compared with treatment with NSAIDs alone if considering renal adverse events.

PMS54

COST-EFFECTIVENESS OF TOCILIZUMAB COMPARED TO STANDARD OF CARE FOR THE TREATMENT OF MODERATE/SEVERE RHEUMATOID ARTHRITIS (RA) IN ITALY

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OBJECTIVES: To evaluate the cost-effectiveness of a treatment sequence including tocilizumab 8mg/kg vs the standard treatment sequence (STS) currently used in moderate/severe RA patients following inadequate response to previous DMARD therapy in Italy. **METHODS:** A cost-utility analysis was conducted from a payor's perspective. An individual simulation model was employed to project lifetime cost, and QALYs for 10,000 patients. The model compared the STS (etanercept, adalimumab, rituximab, abatacept, and palliative care) with a sequence in which tocilizumab replaces etanercept. Patient characteristics (age, HAQ-DI score, sex and weight) were based on data from three phase III clinical trials. A mixed treatment comparison was used to estimate ACR response rates for each of the treatments in both sequences. Patient data from the clinical trials were used to model the relationship between HAQ-DI scores and EuroQol (EQ-5D) utilities. Resource utilization, and treatment costs (acquisition, administration, and monitoring) were obtained from the literature and the Italian formulary. Clinical trial data and available literature provided a basis for fitting appropriate distributions to the model parameters in order to perform probabilistic sensitivity analysis (PSA). Costs and QALYs were discounted at 3.5%. **RESULTS:** The model estimated that the treatment sequence including tocilizumab produced 0.275 QALYs more than the standard sequence at additional cost of €984, resulting in an ICER of €3586 per QALY. Several sensitivity and scenario analyses showed that the model is robust to alternative parameter selections. The results of PSA (1000 samples) demonstrated that the ICER for the tocilizumab sequence is always below a threshold of €50,000. **CONCLUSIONS:** In patients who have failed DMARD therapy, the model consistently predicts that starting treatment with tocilizumab is cost-effective compared to the standard treatment sequence in Italy. The analysis suggests that switching between biologic treatments with different modes of action can be a cost-effective option vs. TNF cycling.

PMS55

COST UTILITY ANALYSIS OF TOPICAL DICLOFENAC FOR THE TREATMENT OF OSTEOARTHRITIS OF THE KNEE

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OBJECTIVES: The purpose of this study was to estimate the cost-utility of a topical formulation of diclofenac compared to a standard diclofenac oral preparation in patients treated for osteoarthritis of the knee having risk factors for gastrointestinal complications (older age or previous GI events). **METHODS:** For this cost-utility analysis, a Markov model was developed based on the model by Maetzel et al.. The analysis was performed according to a Minister of Health perspective over a five-year horizon. The model takes into account incidence of gastrointestinal events, incidence of complicated gastrointestinal events (perforation and bleeding, mortality), incidence of skin related adverse events and use of PPI. Utility estimates associated with each health states were taken from published sources. Cost of medications and costs associated with the management of gastrointestinal events (hospitalisation, emergency visits, physician's visits, endoscopy, etc.) were considered. **RESULTS:** Cost-utility ratios are $39,342 per QALY for patients 65 to 74 years old, $22,019 for those 75 years old and more and $24,141 for patients with previous GI events. Base case results were robust to various deterministic and probabilistic sensitivity analyses. **CONCLUSIONS:** Topical diclofenac is a cost-effective alternative to oral diclofenac for patients having risk factors for GI complications.

PMS56

COST-UTILITY OF AUTOLOGOUS CHONDROCYTES IMPLANTATION USING CHONDROCELECT® IN SYMPTOMATIC KNEE CARTILAGE DAMAGE IN BELGIUM

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OBJECTIVES: Knee cartilage defects increase the risk of osteoarthritis and prosthesis. No standard treatment exists. ChondroCelect® is used in autologous chondrocytes implantation (ACI) to treat symptomatic knee cartilage defect. Its efficacy and safety was demonstrated in a randomized controlled trial (TIG/ACT/01) vs. the surgical procedure microfracture. This study investigated the cost-utility of ChondroCelect® in Belgium. **METHODS:** A decision tree comparing ChondroCelect® to microfracture over a 40-year horizon was developed. Key variables were provided by the TIG/ACT/01 trial (3-year clinical success using the Knee injury and Osteoarthritis Outcome Score [KOOS], 1-year structural repair/presence of hyaline [= good quality] cartilage based on International Cartilage Repair Society visual item [ICRS II] and utility scores by health state derived from the SF-36 questionnaire) and literature (incidence of osteoarthritis starting 15 years post-surgery [model assumption], incidence of total knee replacement [at 20 years] and prosthesis revision [at 35 years]). A patient chart review (n = 82 patients) provided follow-up costs by surgery outcome. National tariffs were applied to medical resources used (Societal perspective). In accordance to Belgian guidelines annual discounting was applied to costs (3%) and effects (1.5%). **RESULTS:** The key TIG/ACT/01 outcomes with Chondrocelect® vs. microfracture were clinical success (KOOS) in 83% vs. 61% (p = 0.018) and presence of hyaline cartilage (ICRS II) in 45% vs. 23% (p = 0.010). The incremental cost/QALY gained was €29,397. The most sensitive parameters were the proportion of patients with hyaline cartilage and the correlation between hyaline cartilage formation and later avoidance of osteoarthritis. Probabilistic sensitivity analysis showed robustness of the results, with 60% of the simulations falling below a willingness-to-pay of €32,400/QALY (Belgian GDP/capita, 2008). **CONCLUSIONS:** A high quality cartilage is expected to translate into reduced osteoarthritis development and thus fewer knee replacements. Corresponding mid/long term QALYs gained and cost savings made ChondroCelect® use in ACI cost-effective in Belgium.

PMS57

COST-UTILITY ANALYSIS OF BALLOON KYPHOPLASTY FOR PATIENTS WITH OSTEOPOROTIC VERTEBRAL COMPRESSION FRACTURES IN JAPAN

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OBJECTIVES: Japan has been facing an aging society and the burden of illness for vertebral compression fracture (VCF) has become a significant issue from an economic point of view as well as clinical point of view. Reduction of pain and improvement